

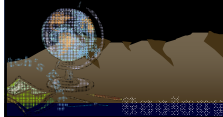
## Review

Why was volcano and earthquake data important?

Who proposed the idea of Plate Tectonics?

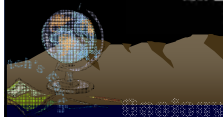
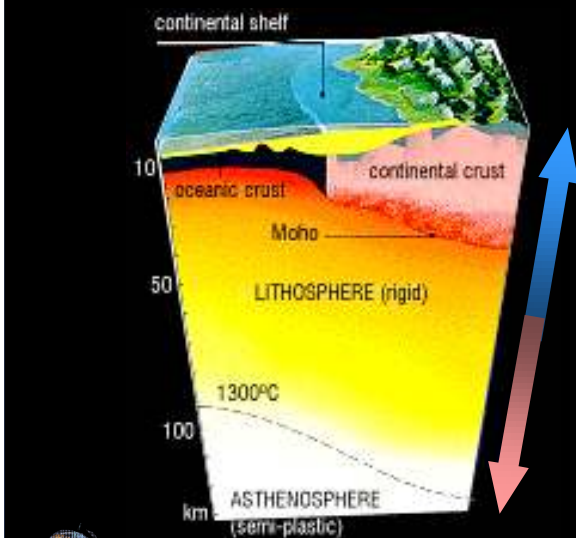
What causes tectonic plates move?

What are the main ways plates can move?



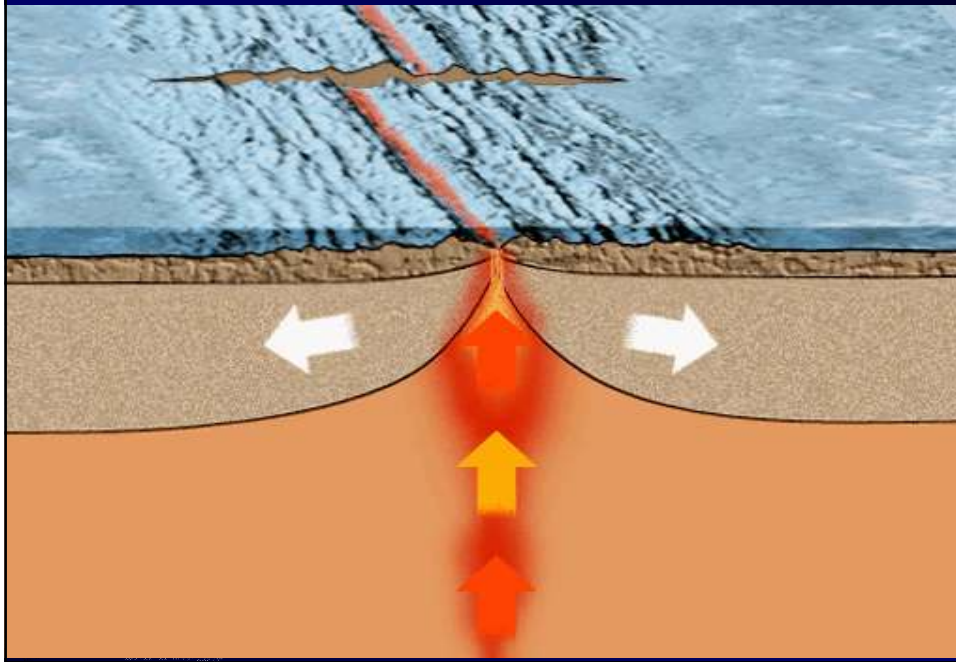
Mr. Fetch's Earth Science Classroom

## First - Let's break things down a bit more...



Mr. Fetch's Earth Science Classroom

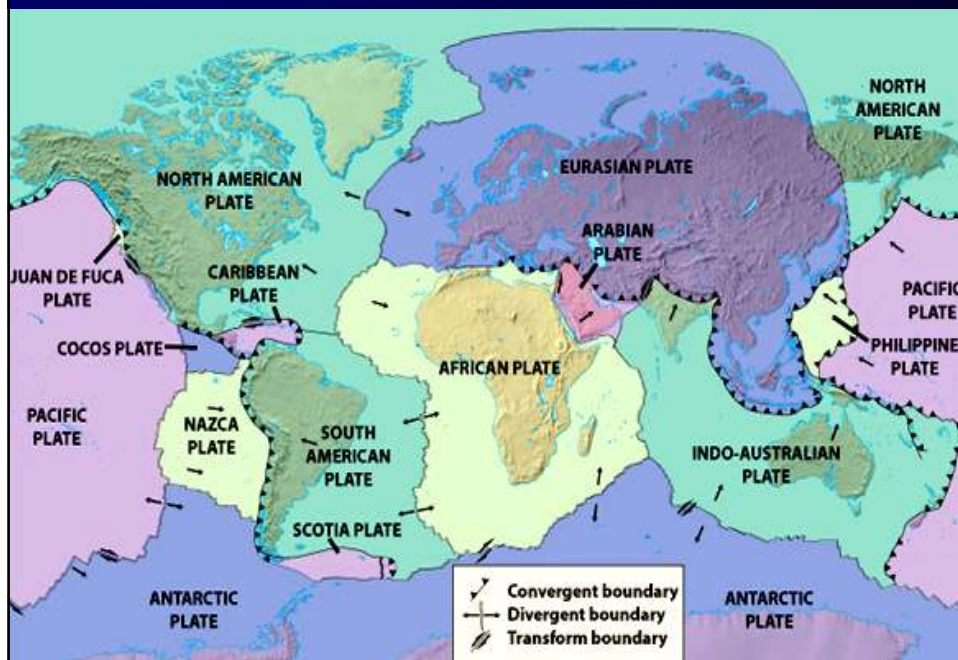
## Review



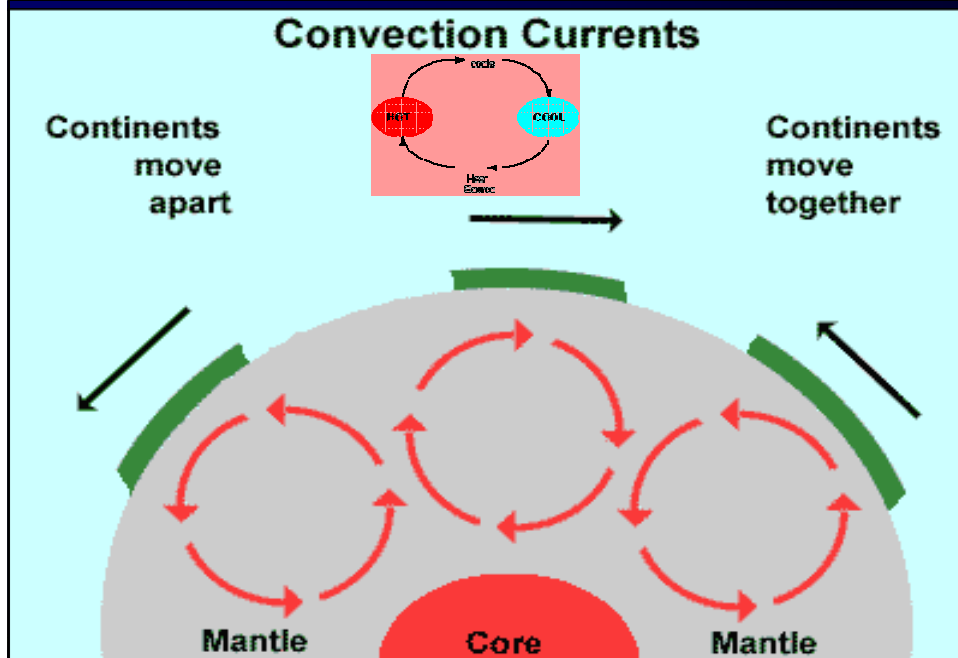
## What does this all mean?



What does this all mean?



What does this all mean?



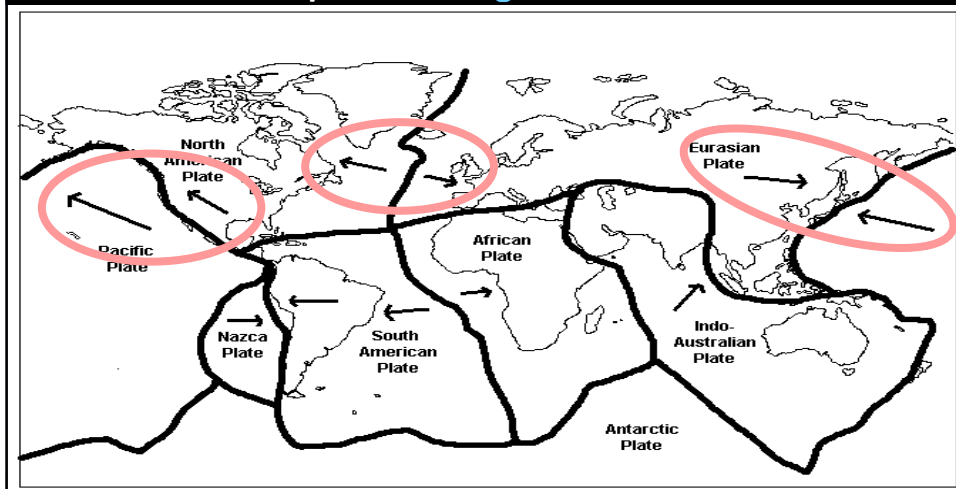
## DIVIDE - COLLIDE - SLIDE

There are three types of motion.

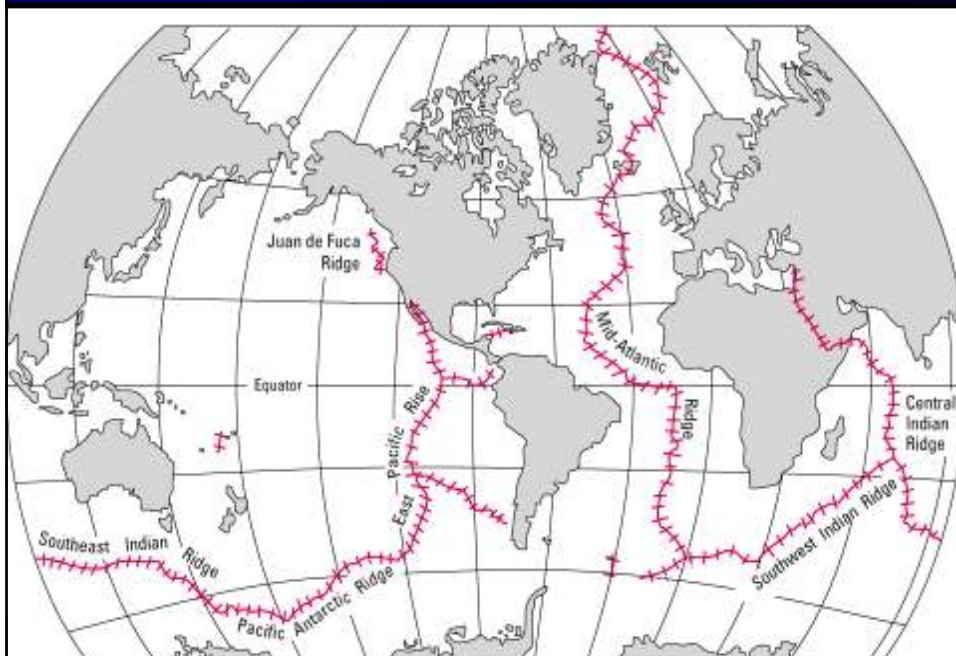
Plates can divide apart and move away from each other.

Plates can collide together and move closer.

Plates can slide past and along each other.

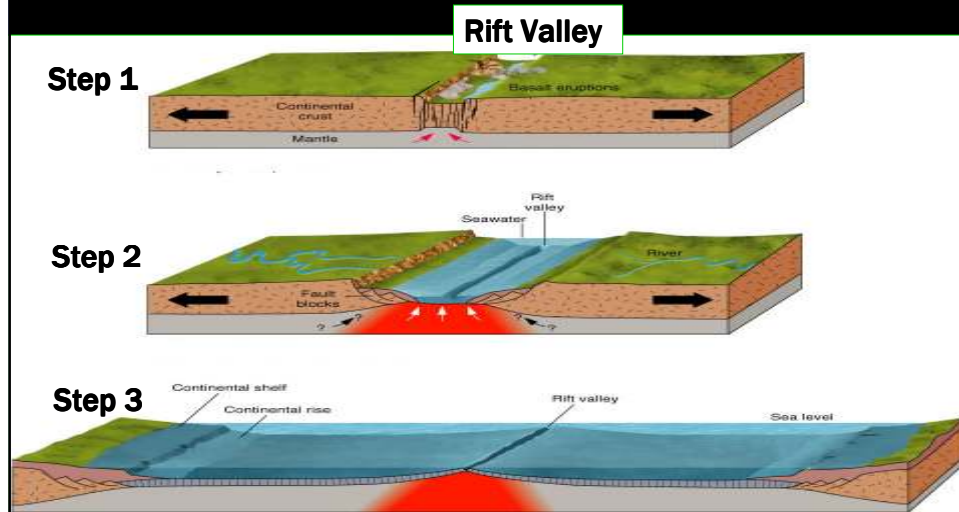


## Plate Motion: Divide



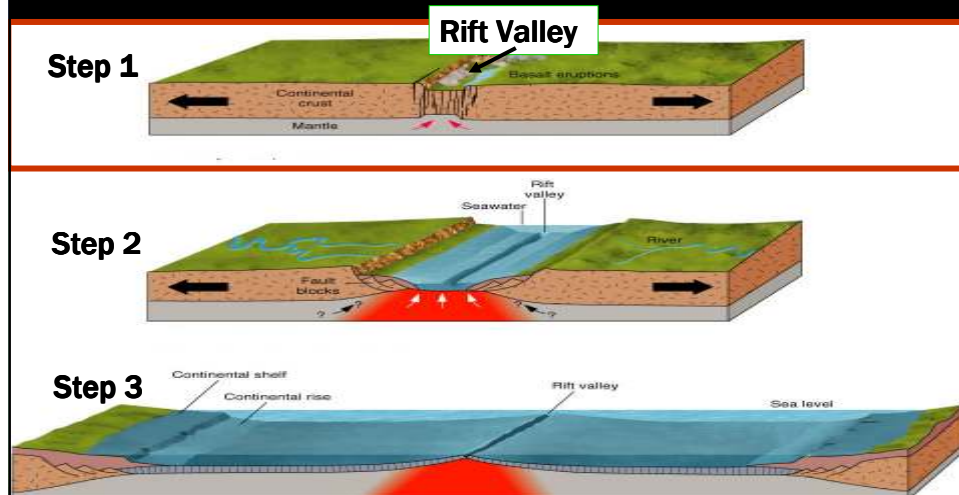
## Plate Motion: Divide

**Divergent Boundary:** When two plates divide or separate.



## Plate Motion: Divide

- Step 1:** - Magma pushes up & cracks the crust. (Upwarping).  
- Convection causes the separated plates to move apart.  
- As they move apart they form a rift, or rift valley.  
- Examples: East African Rift and Rio Grande Rift



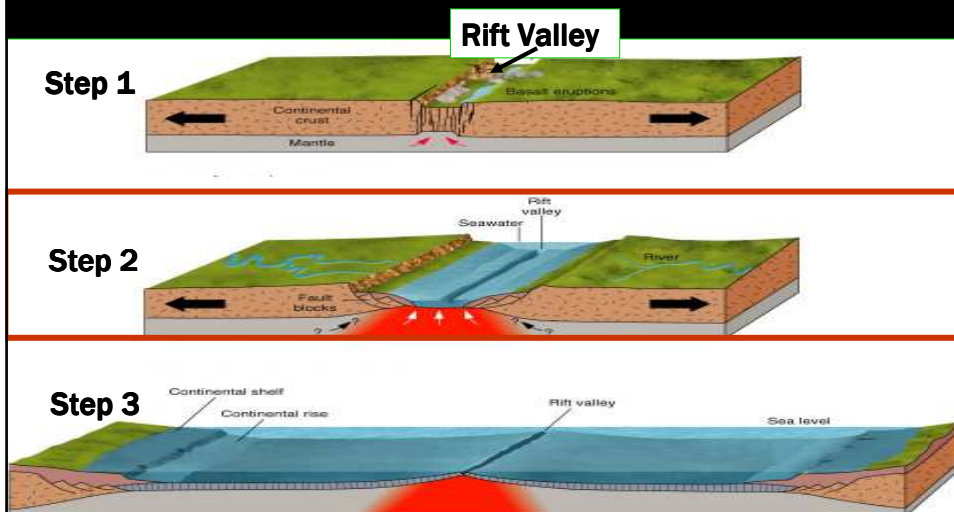


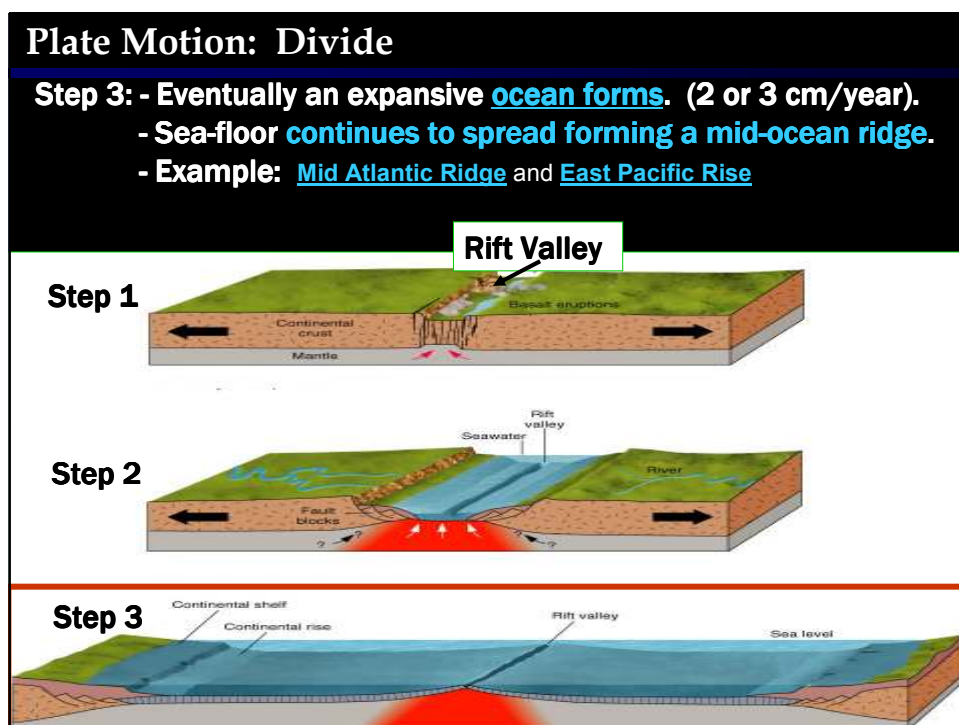
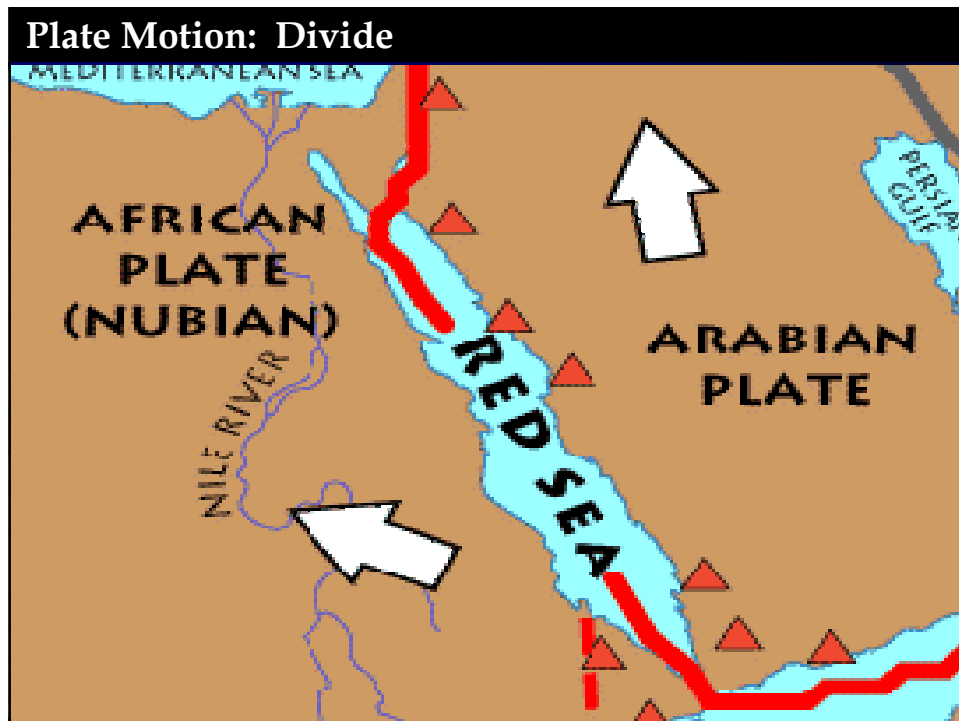
## Plate Motion: Divide



## Plate Motion: Divide

- Step 2:** - Over time the valley widens and continues to separate.
- The valley begins to fill with water and forms a small sea.
  - Example: The Red Sea





## Plate Motion: Divide



## Plate Motion: Slide

Transform / Strike-Slip Boundary

- When two plates slide or slip past one another.
- Example: San Andreas Fault

- Located in California
- North American and Pacific Plate
- Pacific plate moving faster to NW.
- Causes earthquakes in California





### Plate Motion: Slide



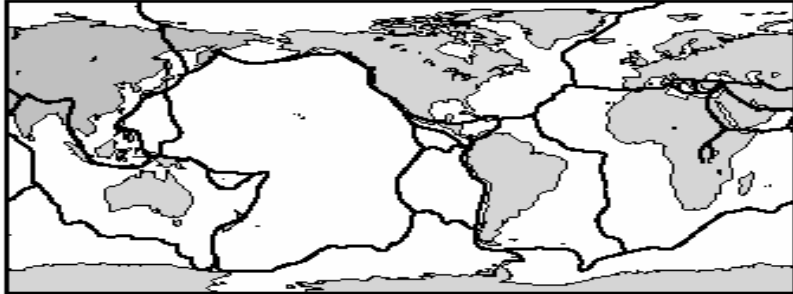
### Review

- 31 The edges of moving crustal plates are often defined by —**
- A ocean basins
  - B frequent seismic activity
  - C intercontinental plains
  - D Earth's largest rivers
- 34 Scientists use volcanoes and earthquake activity to establish —**
- F plate boundaries
  - G lines of latitude
  - H borders between countries
  - J the density of rock layers

## Review

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### Plate Boundaries



**Which of the following major earthquakes did not occur at a boundary between tectonic plates?**

- A** South Carolina (U.S.A.) 1886
- B** San Francisco (U.S.A.) 1906
- C** Messina (southern Italy) 1908
- D** Chillan (Chile) 1939